Measurements of liver stiffness in patients with left ventricular assist device support

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The authors reply:

We thank Dr. Imamura for great interest in our article [1]. We and other group had demonstrated that high liver stiffness (LS) assessed by ultrasound elastography can predict elevated right atrial pressure in patients with heart failure (HF) [2, 3]. More importantly, higher LS was also associated with increased subsequent adverse events in patients with HF [1, 4]. However, its prognostic implication in patients with left ventricular assist device (LVAD) support has not been fully elucidated.

Recently, Dr. Imamura and colleagues reported that aggressive hemodynamic optimization by right heart catheterization reduced various comorbidities and hospital readmission in LVAD patients [5, 6]. Nevertheless, routine or repeated use of invasive hemodynamic assessment would not be recommended because of its specific complications such as infection, hemorrhage and its expensive medical cost as mentioned. Accordingly, several non-invasive techniques for the accurate hemodynamic assessment have been investigated as alternatives to invasive right heart catheterization. Of these, Kashiya, et al. revealed that non-invasive measurement of LS could be useful for predicting the development of right HF and reliable for the evaluation and optimization of right ventricular function following LVAD implantation [7]. Large-scale multicenter studies are warranted to confirm the usefulness of LS-guided hemodynamic optimization in patients with LVAD support.

Compliance with ethical standards

Conflict of interest The author declares that there is no competing interest.

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